Belfry ATC Summer Camp Enhances Knowledge of Coal Industry for Belfry Middle School Students

Theme: *The History and Future of Coal*

Belfry ATC Principal Annette Harris-Ward and her staff decorated the school with coal exhibits and displays. In the above photo, Ward is shown standing at a display where a "coal quilt" is featured.

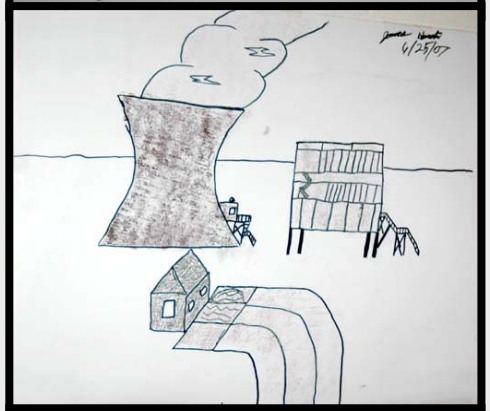
"Because of the new Coal Academy, it was our goal to provide students with an opportunity to enhance their knowledge of how the coal industry works and how our economy relies on workers who are proficient in technical skills, mathematic, scientific and writing. Our teachers developed projects that relate to coal and talked to the students about the skills they could learn in each specific program area. As well, we were fortunate to have some professionals on hand from our local area to offer informative presentations on the history of coal mining and the mining industry as it is today in Pike Co.

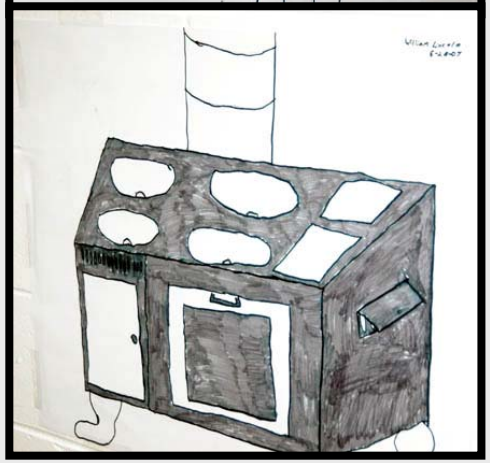
Students were encouraged to participate in traditional and nontraditional activities including performance of emergency management duties, clerical and administrative support duties, coal identification applications, equipment maintenance duties and coal mining applications.

The career camp provided students with a fun learning environment filled with experiences different from those found in a typical middle school classroom atmosphere."

Annette Harris-Ward
Belfry ATC Principal

Coal Posters





From June 25-27, 2007 Belfry ATC instructors engaged students in three days of learning about technical education and skills training programs while engrossed in hands-on activities associated with the coal industry. As part of the overall goal of the camp, technical teachers, academic teachers, a postsecondary instructor and business and industry professionals discussed career opportunities and salaries.

Belfry ATC is one of 9 in the KY Tech system of schools to hold a 2007 summer career camp. All camps are funded *with money provided by the federal government through the America's Career Resource Network (ACRN) and Carl D. Perkins Non-Traditional funds.*

"The whole purpose of this endeavor is to give these young people a glimpse into career programs and occupations that may interest them in the future,"says Karla Tipton, administrator for the state's ACRN funds. "The money we provide for the career camps is an effort to lead students down a path from high school to college and/or work. This year, we also wanted to cover gender equity issues and introduce students to the concept of non-traditional careers. We feel as though our efforts have been successful at this school since students have already requested to be enrolled in the programs offered. And, we believe this will continue to be successful at our other area technology centers."

The Success Xpress Mobile Training Unit

Students were provided with a first hand opportunity to learn about coal mining on state-of-the-art equipment provided by the Eastern Kentucky Concentrated Employment Program, Inc. (EKCEP). The mobile training unit was set up on site and students rotated through the program.

The students were allowed to actually operate the computerized “virtual reality” simulator. According to Mr. David Ruth, EKCEP Coal Mining Services Coordinator, the simulator is used in real world training for miners to learn how to operate a continuous miner machine.

“This is a mobile classroom that offers training at mine sites, colleges and schools,” says Ruth. “For the purpose of this career camp, our goal has been to offer these students the opportunity to learn what coal mining is about and to that extent, how coal is mined and the economic impact coal has on the community and state at large.”

The Success Xpress Mobile Training Unit is a custom-built 53-foot semi-tractor trailer that contains a distance-learning computer classroom, a state-of-the-art computerized mining simulator and an electrical panel hands-on lab. While the unit is primarily used for training, it is also equipped to be used as a mobile command center in the event of a coal mining accident or emergency.

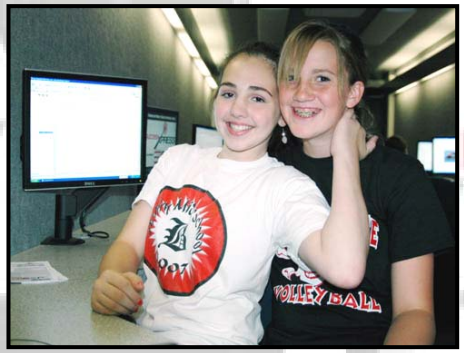
Photo at left: Dennis E. Mayo II, coal career program coordinator for KCTCS Big Sandy – Hagar Hill Campus, instructs Aimee Williamson on how to use the computerized "virtual reality" coal mining simulator. Williamson will enter the 9th grade next year at Belfry High School.

Photo above: KY State ACRN Director Karla Tipton tries her hand at operating a continuous miner using the simulator.

"My goal during this career camp has been to introduce students to how mining training is done during the 21st century. We have used testing and classroom instruction to familiarize students with real world applications and equipment. By using this high tech training unit, we have been able to put students in a real world environment without subjecting them to any of the dangers of mining," says Mayo. "We have also been able to talk to the students about career pathways in this industry and provided them with EKCEP and Big Sandy brochures so they understand the educational choices available to them."

"This was pretty cool because it felt like I was really operating a continuous miner," says Williamson. "It feels just like playing a video game."

Photo (l to r): Cassie Justice and Aimee Williamson.



"We watched a mining video and I learned about the parts of a continuous miner," says Justice. "Even though this was a simulator, the equipment was real."

Above: Belfry ATC Electrical Technology Instructor Robin May discusses coal mining with a student using the computer based training program.

"While there is a lot to learn, we have concentrated on safety issues and instructed students to understand where they are in a mine," says May. "The simulator introduces the students to what it would be like to mine coal underground. It has been exciting for them to utilize the actual remote control used to operate an underground continuous miner."

Photo above (l to r): Robin May, Annette Harris-Ward and David Ruth look over Success Express's electrical training panel.

This area of the training unit was allows *adult* students to get hands-on experience using actual electrical panels as they study to become a certified mine electrician.

Diesel Technology
Instructor John Maynard
Activities: Safety Discussion
Assembling a Model End-loader
Learning about a Bobcat

"In our area of the state, everything depends on coal and I have had an opportunity to talk with students about what a career in diesel technology can do for their future. With the direction that coal is going, I think this career summer camp is a great way to recruit students into our programs," says Maynard. "We're making this model relate to the coal industry because this end-loader is used to load coal trucks and trains."

Photo at left: James Hardin and his mother Tangi.

"We're making this model to relate to the coal industry because the end-loader is used to load coal trucks and trains. And, if this type of machinery breaks down, a diesel technician has to fix it," says James Hardin.

"This camp is like no other that these kids have ever attended. As a parent, I'm so pleased my son and some of his friends elected to take part because they are not only having fun, but they are learning about different careers," says Tangi.

Instructor John Maynard goes over the controls of the "Bobcat" with Tyler Justice.

"Most all kids like machinery and I wanted to be able to have a little show and tell," says Maynard. "One of our industry partners provided us with this Bobcat and I have been able to demonstrate hydraulics being used with diesel equipment."

"I came to this camp because of Tangi. She told us about all the things we would be able to do and it sounded like fun," says Tyler Justice, an 8th grade student at Belfry Middle School. "When I get to high school, I want to come over and take welding and diesel technology."

Health Sciences Instructors: Lisha Biliter, RN
Melissa Scarberry, RN

Activities: Heimlich Maneuver
How to Stop Bleeding by Applying Pressure
Spinal Immobilization and Injuries
MedVac – Medical Evacuation

One of the highlights of the week was when Joe Childers and Chris Gilley, paramedics with Appalachian First Responder, came to explain the procedure of "Spinal Immobilization." Contacted by Belfry ATC Health Sciences Instructor Lisha Biliter, Joe and Chris came to the camp in their ambulance and requested the assistance of a student. Rush Stacy, who will be in the 9th grade next year at Belfry HS, offered his services as the patient.

Photo: Students pose in front of the ambulance after taking a class to learn about Spinal Immobilization

Photo at left: Health Sciences Instructor Lisha Biliter begins spinal immobilization procedure by holding the neck of Rush Stacy. Biliter explained to the students that it is important to assess scene safety first to find out if it safe to approach the injured person. The rationale for this is that you could become a victim too. Secondly, if you do not know the exact injury, treat all injuries as a possible spinal injury. Why? You could prevent future paralysis from a spinal cord injury. Third: Immobilize the head/neck. Why? If there is a spinal cord injury, any movement of the head or neck can lead to paralysis. If severe enough, a spinal cord injury could cause a victim to require ventilation assisted breathing for the rest of their life.

Biliter explained to the students, "Keep the patient talking because it keeps the victim calm."

At left: Childers applies the C-collar as Biliter continues to hold the victim's head and neck.

Above left: Paramedic Joe Childers shows the students a C-collar (otherwise known as a cervical collar). He explains that while the head and neck of the victim must continue to be held by a another individual, the C-collar will be applied by a paramedic.

The "Log Roll"

Childers, Gilley and Biliter explain the procedure of how to place a victim on a long-board by using the Log roll method. Victim's can remain immobilized until after they are screened by an emergency room physician and can also be x-rayed while immobilized. The rationale for a log roll is that the entire body must be turned as a single unit to prevent movement of the spine.

At left: Childers relays to the students that it is important to use a CID-(Cervical Immobilization Device – which can be high-density foam head pads) and says that 'duct tape' is one of the best ways to keep a patient immobilized. The CID and duct tape prevent the victim from moving the head or neck until a physician has evaluated the injury, x-rays have been obtained and the physician gives the order to remove the immobilization.

At left: Childers and Paramedic Chris Gilley get Patient Rush Stacy ready to transfer into the ambulance.

"The most important factor in anything is education," says Childers. "If you see it, you can understand it better."

"Being able to see this demonstration will hopefully give the students an understanding of what we are doing and why we are doing it," says Gilley.

Of his experience as a patient with a spinal injury, Rush Stacy has this to say, "We have a tradition of coal miners in my family and I was interested in this camp. I'm glad I came and being a patient…Well, I felt helpless. But, now I know what to do in case of a spinal injury emergency."

At right: William Lincoln, who will be a 9th grade student next year at Belfry HS, demonstrates how to stop bleeding by applying pressure. Health Sciences Instructor Melissa Scarberry watches as William goes through the procedure.

Machine Tool Technology Instructor: Paul Williamson
Activity: Coal Miner ID Tags

Photo (l to r): Machine Tool Technology Instructor Paul Williamson, 6th grade students Robbie Childers and Michael Palazzolo, and Belfry Middle School Science Instructor Donna Palazzolo pose with the official *"Miners In/Out Board."*

"Once again, the coal mining industry is in a upward cycle and this summer camp has been a great way to educate students about the history of coal and the economic importance it has to our region. At the same time, we have not only been able to effectively tie in the value of our programs to the industry, but also provide these students with an insight of other career pathways too," says Williamson. "The activity I chose was having students create a miner ID tag. This allowed them to use the equipment in my classroom to learn about what a machine tool technologist can do. And, we were able to have a historical discussion on the importance of ID tags because each miner is assigned a number and the ID tag is put on a board to show whether the person is *in or out* of the mine."

At left: Williamson shows Robbie and Michael how to use the CAD machine. Donna Palazzolo looks on in the background.

Above: Robbie and Michael watch as an ID tag is being created in the CNC machine.

"This camp is really fun and Mr. Williamson is nice, friendly and explains everything," says Robbie. "When I get to high school, I want to come here to take machine tool technology. They make a lot of money."

"This camp has been pretty cool and I've learned a lot about coal," says Michael. "I've enjoyed machine tool because we get to make things."

Donna Palazzolo
Science Instructor
Belfry Middle School

Palazzolo has been involved with the Belfy ATC Summer Career Camp for two years. Here's what she has this to say regarding the experience and how this activity has helped her to understand the types of programs offered at the area technology center and how it is of value to her as a science teacher.

"I think the whole camp is great, as well as the whole school, because I have had a first hand opportunity to learn about what they do at this technology center. Because of my experience with the teachers at this center, I bring my 7th grade science class over here during the school year so they can see the real life application of what we are doing in class – and, they love it!

This is my second year of being involved in this camp and I have found that the technical teachers are able to demonstrate the real life science concepts that I'm trying to teach in my classroom. I teach the theory, but they teach the real life application. And, they have to understand the concepts to teach the applications."

Donna Palazzolo

Welding Instructor: Jonathan Bogar
Activities: The Importance of Safety
Making a Coal Shovel

"We have discussed safety this week as it relates to our individual program areas and mine safety," says Bogar. "With our individual projects, we have been able to relate what students can do if they chose this as a career, as well as how our respective program relates to the coal industry. I think this has been a great idea because we live in the middle of *The Billion Dollar Coal Field*."

Photos at right: Bogar works with 6th grade student Timmy Justice as he softens the metal (catch edge) that will be formed around the head of the shovel.

According to Bogar, students can use the "coal shovel" as a fireplace shovel, or in some cases, as a real coal shovel because they have a coal burning stove in their home.

Photo: Diesel Technology Instructor John Maynard helped Bogar by working with students at the Metal Shear machine. Stevan Gibbs, who will be going into the 9th grade next year, is listening to instruction on how to use the machine.

Activity: Making the "catch edge" for a coal shovel.

"We have worked hard to engage students in interesting and outside of the box activities so we can get them hooked on what we do at this school," says Maynard.

"So far this week, I've liked all the classes and welding has been fun. In all of my classes, we have talked about safety and why it is important," says Stevan. "But, when I grow up, I plan to be a diesel technician and I'm glad that I can come to this school."

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Written by: Fran Dundon